

**Draft Report (10/01/2015)**

INITIAL REVIEW ENGINEERING REPORT

MCAN: J15-0034, [REDACTED]

ENGINEER: Macek / JAS

SUBMITTER: [REDACTED]

MICROORGANISMS:

Recipient/host (p. 11):

i. *Saccharomyces cerevisiae* [REDACTED]

Donors (p. 13, 17):

[REDACTED]

GEMs (p. 17):

The GEMs are referred to as: *S. cerevisiae* strains

[REDACTED]

[REDACTED]

[REDACTED]

PV (p. 94):

[REDACTED]

[illegible]

[REDACTED]

<p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p>	<p>_____</p> <p>_____</p>
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[REDACTED]

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[REDACTED]



[REDACTED]

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Sporulation (p. 74)

It is not expected that the genetic modifications to the MCAN strains [REDACTED] would be expected to increase sporulation compared to the unmodified parental strain [REDACTED], and therefore would not be expected to have an increase in dispersion via insect vectors. [REDACTED]

[REDACTED]

EPA did not assess sporulation releases, consistent with past case [REDACTED]

INITIAL REVIEW ENGINEERING REPORT

MCAN: J15-0034C

PROCESSING:

Site/Location:

Days/yr:

Basis:

PROCESS DESCRIPTION

[REDACTED]

[REDACTED]

[REDACTED]

#### ENVIRONMENTAL RELEASE SUMMARY

[REDACTED]

#### AIR

1) [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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- [REDACTED]
- [REDACTED]
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- [REDACTED]
- [REDACTED]
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**[REDACTED] [REDACTED] [REDACTED]**

## WATER

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**OCCUPATIONAL EXPOSURE**

Number of Workers: [REDACTED]

Days/site-yr: [REDACTED]

Basis: [REDACTED]

[REDACTED]

PPE: [REDACTED]

Table 1: Worker Activities per Shift (submission, p. [REDACTED])

Activity	# of Workers per Activity	PPE/Eng. Controls	Maximum Freq. of Activity (Days)	Work Duration (Hrs)	Maximum Duration Exposed	
					Hr/Day	Day/Yr
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

INHALATION:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED] [REDACTED] [REDACTED] [REDACTED]

DERMAL :

[REDACTED]

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INITIAL REVIEW ENGINEERING REPORT

MCAN: J15-0034C

USE:

Number of Sites/Locations:

Days/site-yr:

Basis:

PROCESS DESCRIPTION



[REDACTED]

## ENVIRONMENTAL RELEASE SUMMARY

### AIR

- 1) [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

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# WATER

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#### OCCUPATIONAL EXPOSURE

[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

Table 2: Worker Activities per Shift (submission, p. 100)

Activity	# of Workers per Activity	PPE/Eng. Controls	Maximum Freq. of Activity (Days)	Work Duration (Hrs)	Maximum Duration Exposed	
					Hr/Day	Days/Yr
[REDACTED]	1	[REDACTED]	1	1	1	1
[REDACTED]	1	[REDACTED]	1	1	1	1
[REDACTED]	1	[REDACTED]	1	1	1	1
[REDACTED]	1	[REDACTED]	1	1	1	1
[REDACTED]	1	[REDACTED]	1	1	1	1
[REDACTED]	1	[REDACTED]	1	1	1	1

INHALATION:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

DERMAL :

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



█ Contact Report  
MCAN: J15-0034C  
Page 1 of 1

Submitter: █

Date: September 17, 2015

Person Contacted: █  
Affiliation: █  
Telephone: █

Caller: Jason Sese  
Affiliation: ERG for EPA

Q1: Can you clarify the production volumes? █  
█

GEM Strain	1 <sup>st</sup> Year PV (CFU/yr)	3 <sup>rd</sup> Year PV (CFU/yr)
█	█ █	█
█	█	█ █

A1: █

Q2: █

A2: █

Q3: █

A3: █